Amendments to the Specification:

Please replace the paragraph beginning on page 25, line 10, and continuing to page 16, line 5, with the following rewritten paragraph:

Referring now to the drawings, and more particularly to Figure 1, the BDML processor consists of three parts that are executed in sequence: a syntax processor 11, a logic processor 12, and a knowledge-based processor 13. The syntax processor 11 checks that all mandatory BDML tags exist in the document, performs consistency checks on BDML tags and the Java-based syntax of variables and logical descriptions. The syntax processor 11 is similar to a computer programming language compiler and is constructed using standard tools of the compiler trade (see, for example, Thomas Pittman and James Peters, *The Art of Compiler Design: Theory and Practice*, Prentice Hall, 1991). The knowledge-based processor 13 provides suggestions to the user to correct any logical inconsistencies found in the BDML document(s). The knowledge-based processor matches the inconsistencies found by the logic processor 12 with cases contained in a knowledge base and ~~select~~ selects suggestions from the same knowledge base. This knowledge base contains business process scenarios that are commonly found and can be industry and context specific. For example, a knowledge base can be developed for a supply chain involving a retailer and multiple manufacturers that supply the retailer, or for the customer order fulfillment process of semiconductor manufacturers. The knowledge-based processor 13 is constructed using standard tools of the knowledge-based systems trade (see, for example, Cornelius T. Leondes (Editor), *Knowledge-Based Systems Techniques and Applications*, volumes 1-4, Academic Press, 2000).

Please replace the paragraph on page 29, lines 6 to 23, with the following rewritten paragraph:

In Figure 5, blocks ~~51a~~ 51A, ~~53a~~ 53A and ~~55a~~ 55A contain the objective for blocks 51, 53 and 55, respectively. Blocks 51 to 56 are identical to blocks 41

to 46 in Figure 4. The objective for block 51 is to provide the historical unit sales by product by week with the sales figures within a user-specified range (zero to a conceivable maximum) and with no missing values in the entire history (see block ~~51a~~ 51A). The objective for block 53 is to provide a sales forecast that minimizes the weighted least square error for a linear model over the historical horizon. (See block ~~53a~~ 53A). This is the objective for the standard simple exponential smoothing model. See, e.g., Lynwood A. Johnson and Douglas C. Montgomery, *Operations Research in Production Planning, Scheduling, and Inventory Control*, John Wiley, 1974.) The objective for block 55 is to estimate the effect of causal factors in the form of coefficients in a log-linear model, such as price markdown, that minimizes the least squared error for the model over the historical horizon. (See block ~~55a~~ 55A). Least squared error is the objective for standard linear regression analysis. See, e.g., Norman R. Draper and Harry Smith, *Applied Regression Analysis*, Second edition, John Wiley, 1981. Log-linear models are commonly used for promotions and price mark downs in the marketing trade.)

Please replace the paragraph beginning on page 29, line 24, and continuing to page 30, line 8, with the following rewritten paragraph:

In Figure 6, blocks ~~61a~~ 61A, ~~63a~~ 63A and ~~65a~~ 65A contain the constraints for blocks 61, 63 and 65, respectively. Blocks 61 to 66 are identical to blocks 41 to 46 in Figure 4. The constraints for block 61 are that the historical sales have to be larger than or equal to zero and smaller than or equal to a user-specified maximum. The maximum is a conceivable largest sales number and is there to eliminate erroneous data. (See block ~~61a~~ 61A.) The constraint for block 63 is that historical sales have to be larger than or equal to zero in order to be considered by the exponential smoothing model. (See block ~~63a~~ 63A.) This is a common assumption in standard exponential smoothing models. The constraint for block 65 is that the historical sales have to be strictly larger than zero in order to be considered by the log-linear regression model. (See block ~~65a~~ 65A.) This assumption is frequently used in practice since it is not possible to take the logarithm of zero.

Please replace the paragraph beginning on page 30, lines 9 to 22, with the following rewritten paragraph:

In Figure 7, blocks ~~71a~~ 71A, ~~73a~~ 73A and ~~75a~~ 75A contain the assumptions for blocks 71, 73 and 75, respectively. Blocks 71 to 76 are identical to blocks 41 to 46 in Figure 4. The assumptions for block 71 are (see block ~~71a~~ 71A):

1. The unit sales by week of a product are simply the sum of the unit sales in all POS transactions of that product.
2. The revenue by week of a product are simply the sum of the dollar sales in all POS transactions of that product.
3. The selling price of the product by week is the average selling price of the product over the week.

The assumptions for block 73 are (see block ~~73a~~ 73A) that the seasonal index is additive and the price markdown effect (denoted by "price lift factor" in block 73a) is multiplicative. The assumptions for block 75 are (see block ~~75a~~ 75A) that the seasonal index and the price markdown effect are both multiplicative (due to the log-linear model).